



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

AS

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/161,283	09/28/98	MAEKAWA	T PMS255979

PILLSBURY MADISON & SUTRO
INTELLECTUAL PROPERTY GROUP
1100 NEW YORK AVENUE, N.W.
NINTH FLOOR, EAST TOWER
WASHINGTON DC 20005-3918

IM62/0626

EXAMINER

AHMED, S

ART UNIT	PAPER NUMBER
----------	--------------

1773

DATE MAILED: 06/26/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/161,283

Applicant(s)
Ma kawa

Examiner
Sheeba Ahmed

Group Art Unit
1773



☒ Responsive to communication(s) filed on Apr 13, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle* 35 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claim

☒ Claim(s) 1, 2, 4, 5, and 8-15 is/are pending in the application

Of the above, claim(s) _____ is/are withdrawn from consideration

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1, 2, 4, 5, and 8-15 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☐ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s) _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

Art Unit: 1773

DETAILED ACTION

Response to Amendment

1. Amendments to the Specification and Claims 1 and 4 have been entered in the above-identified application. Claims 3, 6, and 7 have been canceled. New claims 9-15 have been added.

The amendments to claim 4 are improper since underlining should be used to indicate additions to the claims as provided in 37 CFR 1.121(a)(2)(ii).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 2, 13, and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "a laminated extruded resin sheetproduced by laminating a resin layers (B) on both surfaces of a resin layer (A).....the resin layer (A) comprising a methyl methacrylate resin, and the resin layer (B) being made by dispersing.....1 to 50 parts by weight of insoluble methyl methacrylate resin particles.....based on 100 parts by weight of a base resin comprising a methyl methacrylate resin".

Art Unit: 1773

Claim 2 is dependent on amended claim 1 and recites that “the methyl methacrylate resin is a resin containing”. However, it is unclear whether “the methyl methacrylate resin” refers to the methyl methacrylate resin of layer (A), the base resin comprising a methyl methacrylate resin or to both. Clarification ~~is~~ required.

Claim 13 recites that the rubber-containing polymer is an acrylic polymer having “a layer of an elastomer as an inner component and a hard layer as an outermost component layer”. Claim 14 recites that the acrylic polymer has “a hard layer as an innermost layer, a layer of an elastomer as an inner component and a hard layer as an outermost layer”. It is unclear what is meant by the above mentioned recitations. It is unclear from the claims and the Specification what is meant by “a hard layer as an innermost layer, a layer of an elastomer as an inner component and a hard layer as an outermost layer”? Is the acrylic polymer in a particulate form wherein the particulate material has “a hard layer as an innermost layer, a layer of an elastomer as an inner component and a hard layer as an outermost layer”? Is this structure similar to that of a core-shell elastomer? Clarification is required.

The language of the above mentioned claims must be amended to clarify what is meant to be encompassed by the claims.

Art Unit: 1773

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 2, 4, 5, 8-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatakeyama et al. (US 5,804,287) in view of Visser (US 5,851,606).

Hatakeyama et al. disclose an acrylic-laminated injection molded article which is produced by adhesively laminating a resin layer with a specific acrylic film (Column 1, lines 5-10). The acrylic film (*equivalent to layer B of the claimed invention*) is obtained by using a rubber-containing acrylic polymer and a methyl methacrylate resin which has 0-50 weight percent of at least one other vinyl monomer which is copolymerizable therewith. The rubber-containing polymer is a graft copolymer with a multilayer structure and has an elastic copolymer with 50 weight percent or more of a methacrylic acid ester grafted thereon (Column 2, lines 10-26 and 38-67 and Column 3, lines 1-48). The acrylic film may contain additives such as stabilizers, lubricants, processing aids, plasticizer, impact resistance aids, filler, coloring agents and UV absorber (Column 4, lines 48-54). The resin layer (*equivalent to layer A of the claimed invention*) serves as the base material and may be an acrylic resin (i.e., methyl methacrylate resins). The acrylic film may be heated and shaped by vacuum molding and subsequently melt-integrated by extrusion molding (Column 6, lines 13-44). Hatakeyama et al. disclose the claimed invention but

Art Unit: 1773

do not specifically state that the acrylic film (i.e., layer B) contains methyl methacrylate resin particles or that the resin layer (i.e., layer A) contains the rubber-containing polymer. However, Visser discloses a thermoformable acrylic resin sheet wherein particles of a methyl methacrylate resin are incorporated into a liquid methyl methacrylate resin composition and brought into a flat mold and polymerized to produce the thermoformable acrylic sheet (Column 1, lines 4-13). The methyl methacrylate resin particles are crosslinked and have a particle size smaller than 1mm (Column 1, lines 63-67). The thermoformable acrylic resin sheet is intended for thermoforming into a shaped article by heating and softening the resin sheet in a vacuum mold (Column 5, lines 52-65). Accordingly, it would have been obvious to one having ordinary skill in the art to add methyl methacrylate particles to the acrylic film disclosed by Hatakeyama et al. given that Visser specifically teaches that addition of methyl methacrylate resin particles to a thermoformable acrylic sheet leads to excellent mechanical strength and improves its suitability for industrial use. The Examiner further takes the position that it would have been obvious to one having ordinary skill in the art to add the rubber-containing polymer to the resin layer (i.e., layer A) given that Hatakeyama et al. specifically state that the addition of such a polymer has the effect of imparting excellent impact resistance and elongation to the resin composition. With regards to the limitation that the rubber-containing polymer has a hard layer as an innermost layer, a layer of an elastomer as an inner component and a hard layer as an outermost layer, the Examiner takes the position that such a limitation must be met by the rubber-containing polymer disclosed by Hatakeyama et al. given that Hatakeyama et al. state that their rubber-containing polymer has a multilayer

Art Unit: 1773

structure and the polymer has the same composition as that of the rubber-containing polymer of the claimed invention. Furthermore, with regards to the limitations that the laminate has a B/A/B structure wherein the layer thickness ratio is from 1/200/1 to 1/1/1 and that the difference of a ratio of the methyl methacrylate monomer unit constituting a base resin and a ratio of the methyl methacrylate monomer unit constituting the resin particle does not exceed 30%, the Examiner takes the position that it would have been obvious to one having ordinary skill in the art to laminate acrylic films on both sides of the resin layer given the expectation of equivalent results and to optimize the thickness of each layer and the concentration of each component by routine experimentation particularly in the absence of a showing of criticality.

Response to Arguments

4. Applicant's arguments filed on April 13, 2000 have been fully considered but they are not persuasive.

Applicants traverse the above rejection, as it applied to the original claims, and submit that the acrylic sheet of the present invention has a three-layer structure and is produced by a multi-layer extrusion process wherein the acrylic resin sheet of the present invention is secondary thermoformed by itself to obtain a molded article. Applicants further argue that Visser does not disclose anything about a bias of thickness and hence there is no description suggesting the constitution of the present invention. In response, the Examiner would like to remind the Applicants that the Examiner has taken the position that it would have been obvious to one having

Art Unit: 1773

ordinary skill in the art to laminate acrylic films on both sides of the resin layer given the expectation of equivalent results and particularly in the absence of a showing of criticality. Applicants have failed to provide any experimental data or other objective evidence indicating that the three layer structure of the claimed invention is indeed critical and leads to unexpected results. Furthermore, the determination of patentability for the product claims is based on the product itself and not on the method of production. If the product is the same or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985) and also see MPEP 2113. In this case, the product (i.e., the resin sheet) is obvious despite the process limitations of multi-layer extrusion molding.

The Applicants argument regarding Visser is unclear to the Examiner. In any case, it is noted that the features upon which applicant relies (i.e., bias of thickness) are not recited in the independent rejected claims. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).


Art Unit: 1773


Conclusion

5. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

6. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sheeba Ahmed whose telephone number is (703) 305-0594. The Examiner can normally be reached on Monday-Friday from 8am to 5pm.

 Sheeba Ahmed
June 21, 2000


Paul Thibodeau
Supervisory Patent Examiner
Technology Center 1700